DETAIL A FLATCAR p. [illegible] **READERS SHARE FIRST TRAINS** p. [illegible]

CLASSIC TOY TRAINS

O AND S GAUGE FOR THE OPERATOR AND COLLECTOR

NOVEMBER [illegible]

INSIDE! 81 TIPS & TRICKS

GREAT SCENES

LESSONS FROM 2 RELIABLE AND ENTERTAINING LAYOUTS p. [illegible]

THE O GAUGE TRACK PLAN YOU ASKED FOR! p. [illegible]

COLLECTING THE FINEST TRAINS OF ALL TIME p. [illegible]

+ HOW-TO SCENERY DETAILS p. 34

WORKSHOP WISDOM · Q & A · YOUR PHOTOS

NEW PRODUCTS · COLLECTIBLE CLASSICS

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THE SD70ACE.

Now leaving the yard and coming to a dealer near you.

The Athearn® Genesis® SD70ACe HO locomotive is a one-of-a-kind masterpiece. From fuel tanks with single or dual fillers to etched see-through grilles to correctly sized operating ditch lights, it's no wonder the Athearn SD70ACe is one of the year's most sought-after locomotives. Get to your local train dealer today and get your hands on one. They come with or without Tsunami SoundTraxx sound. And they won't last long.

Also, be sure to preorder the next run of SD70ACe and SD70M-2 locomotives. They include all the features and detail of the first run with four additional roadnames to choose from. Get your order in by December 15. Learn more at www.athearn.com.

HORIZON

UP 1983

[illegible]

[illegible]

[illegible]

A DAY IN THE LIFE OF A RAILROAD.

[illegible]

THE BIGGEST LITTLE RAILROAD IN AMERICA FOR 50 YEARS RUNNING.

GENESIS: THE PREMIUM TRAINS FROM ATHEARN

Genesis® DDA40X · Union Pacific
[illegible]

FEEL THE THUNDER.

[illegible]

[illegible]

[illegible]

SEE THE ALL-NEW DDA-40X
[illegible]

[illegible]

[illegible]

[illegible]

HORIZON

[illegible]

Switch to Athearn's New SW1000

Add Athearn's new EMD SW1000 diesel switcher to your railroad now. This contemporary switcher is completely Ready To Roll, meaning you can take it out of the box and place it directly on your HO layout. Nicely detailed with [illegible] handrails and McHenry® knuckle spring couplers, the Athearn® SW1000 is designed using railroad-specific details, such as horns, [illegible] platforms and spark arrestors. Also check out the see-through etched metal radiator grille! The latest [illegible] drivetrain and a can motor ensure a smooth ride. This locomotive is even DCC-ready for either 8- or 9-pin plug-ins.

See all 10 versions, including the unique BNSF "tortoise" scheme, at your local hobby shop, or browse the collection online at **www.Athearn.com**

[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	

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RAILMODEL JOURNAL

How YOU can do it BETTER

September 1991 Volume 3, Number 4

Table of Contents: "The Journal"

All Scales

Operations:
[illegible]

Plans:
[illegible]

Techniques for better and easier modeling:
[illegible]

HO Scale

Freight Cars
[illegible]

Details to model:
[illegible]

Techniques for better and easier modeling:
[illegible]

Locomotives in Action
[illegible]

N Scale

[illegible]

Details to model:
[illegible]

O Scale

Details to model:
[illegible]

G Scale

[illegible]

Departments

What's New? [illegible]
Calendar [illegible]
Locomotives in Action [illegible]

On the Cover: [illegible]

Jim Wrinn

The next generation is here

One of the questions that I often hear, whether I'm among fans or professionals, is about the next generation of enthusiasts and railroaders. Where will they come from? How do we interest them in a business and technology that is largely hidden? Will they come at all?

I've stopped looking for the next generation. They're already here.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

CREW CHANGE

[illegible]

Michigan Tech students gather for a railroad career event. And yes, that is a copy of Trains they picked up! [illegible]

Trains

[illegible]

Never settle for less than the very best.

[illegible]

[illegible]

Big changes ahead for CP

What's ahead for the railroad following the ouster of its management

[illegible]

[illegible]

[illegible]

Bill Ackman: "We hear loud and clear your mandate for change, and we are honored to work with the new board to take this great company to even higher levels of performance and achievement. We will not make progress overnight, but we will deliver on our commitment to make this railway one of the best railways in the world."

[illegible]

CP's big change up: Who's in, who's out

CP's annual shareholder meeting May 17

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Fred Green

Bill Ackman

E. Hunter Harrison

Teamsters Canada Rail, representing 4,800 engineers, conductors, and dispatchers called for a strike at CP five days after the shareholder meeting. [illegible]

IZAAK WALTON INN

[illegible]

NEWS&PHOTOS

Call this the rail Olympics

6 million to 8 million visitors will use trains in London for games

London's Olympic Park is adjacent to the main line from London Liverpool Street station. [illegible] railways also go under or around the Olympic Park [illegible]. [illegible]

An estimated 6 million to 8 million 2012 Olympic and Paralympic spectators will ride on the rails in the United Kingdom from July until September. Many visitors will travel to Olympic Park in less than 10 minutes using the [illegible] Channel Tunnel [illegible] trains, a [illegible] Olympic [illegible].

The Olympic site around Stratford has railway origins [illegible] 1880s [illegible] Olympic Park [illegible] dating to 1847 and [illegible].

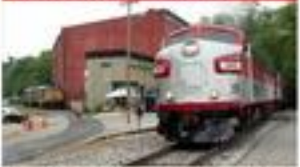
The site also encompassed freight yards and [illegible].

To build the Olympic Stadium and other venues at Olympic Park, construction materials came in by train with a temporary terminal set up for unloading building materials. [illegible] all the construction work, Olympic Park [illegible] rail [illegible] and freight routes.

Ninety percent of the venues will be served by three or more forms of public transportation and the organizers expect 80 percent of visitors and staff to use [illegible]. [illegible] London gets better [illegible] after the games are done.

— KEITH FENDER, London journalist and contributor to several rail publications

» And it's R. J. Corman by a nose!



Continuing a fine railroad tradition of running special trains to special events, R. J. Corman FP7s [illegible] and [illegible] pull a Kentucky Derby train through Frankfort, Ky., on May 5 on the way to the 138th edition of the popular horse race. CSX's office car train waits in the former Frankfort & Cincinnati yard before pulling out to board passengers and follow. As usual, Norfolk Southern also ran a train. [illegible]

BY DON PHILLIPS

Amtrak gets 'real' with new equipment plan

If politics doesn't interfere, this report may chart a course to real growth

[illegible]

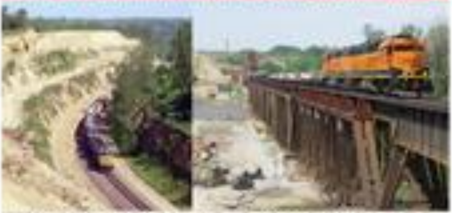
[illegible]

ACELAS BEGAN LIFE AS MECHANICAL DOGS; NOW THEY HAVE A BETTER RECORD THAN REGULAR TRAINS ON THE NORTHEAST CORRIDOR.

[illegible]

[illegible]

» BNSF adding to Missouri River bridge capacity at Plattsmouth



BNSF Railway is building a second [illegible]-foot bridge over the Missouri River at Plattsmouth, Neb., where it crosses into Mills County, Iowa. In addition, the company is expanding a deep cut on the west approach to the bridges to allow for the second track. The route is busy with coal from the Powder River Basin in Wyoming, and hosts Amtrak's California Zephyr. [illegible]

EXPLORE THE RAIL INDUSTRY AT RSI/CMA 2012

Carl Ice, BNSF President and Chief Operating Officer, will deliver the keynote address on Monday, September 24 at the Opening General Session.

September 23 – 26, 2012 · Sheraton Chicago Hotel & Towers · www.rsiweb.org

- **Discover What's New:** Explore the best of the freight and passenger railroad supply industries on our show floor as new products are displayed and opportunities for new connections abound.
- **Learn the Latest:** The Coordinated Mechanical Associations (Air Brake Association, Inc., International Association of Railway Operating Officers, Locomotive Maintenance Officers Association, Mechanical Association Railcar Technical Services) will host presentations by innovators developing leading edge technologies in the industry. This information is more important in an ever changing industry and allows for discussion you can't get anywhere else.

RAILWAY SUPPLY INSTITUTE

Learn more about RSI/CMA 2012 at www.rsiweb.org
or call us at 202-347-4664.
Registration is available online.

Now boarding for Norfolk, Va.

How to start new passenger service sooner than later

Virginia's new passenger train to [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

UP 150th Anniversary Sale

New titles - you'll want them all!

Union Pacific DVDs 15% OFF with code UP150 thru [illegible]

SundayRiverProductions.com 866-544-7771

» Goodbye, Brooklyn. Hello, new home!

The [illegible] Southern Pacific roundhouse in Portland, Ore.'s Brooklyn section has been home to operational SP 4-8-4 Daylight No. 4449 since 1981, but that ended with a June 30 deadline Union Pacific set for the engine along with Spokane, Portland & Seattle 4-8-4 No. 700 and other historic rolling stock, to vacate for an expanded intermodal yard. New home for 4449 and friends is a 20,000-square-foot, [illegible] million structure built near Oregon Museum of Science & Industry (OMSI), with connections to Oregon Pacific and UP. It should be ready by fall. Brooklyn turntable goes to the new home. [illegible]

We're Not Just On Track...
We're Ahead of the Emissions Curve!

WHY WAIT?

BROOKVILLE locomotives, meeting Tier 3 or Tier 4 exhaust emissions, are now available!

Contact us today to learn more.

Above: BROOKVILLE'S [illegible]

BROOKVILLE

Brookville Equipment Corporation
175 Evans Street • Brookville, PA 15825 • www.brookvillecorp.com • 814.849.2000

BY FRED W. FRAILEY

That Commodore Vanderbilt feeling

What remains of that magnificent railroad in upstate New York? More than you may imagine

[illegible]

[illegible]

THE VANDERBILTS BUILT ACROSS NEW YORK AS IF ANTICIPATING THE HIGH-SPEED TRAINS OF THE 21ST CENTURY

[illegible]

[illegible]

BackDrop Warehouse

Wholesale

100s of scenes
Real Photography
Easy BackGrounds [illegible]
Suggested Retail [illegible]
12.25 high x 8.5 [illegible]
Commercial, Industrial, Mountains, Hills, Agricultural

Retail customers
Show this to your favorite hobby shop
or visit our web site for retail sales
[illegible]

Hobby Shops with storefront only
Free Catalog Free Sample

http://www.backdropwarehouse.com

[illegible]

"Quality is never an accident, it is always the result of intelligent effort"
[illegible]

KAPPLER
Mill [illegible] Co.

[illegible]

[illegible] www.kapplermill.com [illegible]

Santa Fe ... All the Way!

MICROSCALE DECALS offers a wide assortment of decals for the popular Santa Fe Railway. Here are but a few of the sets we offer for the late steam - early diesel era

[illegible]

SUPPORT YOUR LOCAL HOBBY SHOP

[illegible]

CITY SCENE

With Models From Micro Engineering

[illegible]

[illegible]

In addition to our unique decoders, we've recently enhanced many of our 16-bit units with features never before available. Here's a taste of what some MRC decoders now offer.

Our Back EMF control automatically adjusts. Or if you prefer, you can make your adjustments manually.

Until now, air compressor sounds only delivered a constant RPM sound. Now, like the popular prototypes, we've enhanced the air compressor sound on our diesel decoder so it's in synch with the RPM of the prime mover. Depending on loco type, use the decoder either synched or non-synched to the prime mover. **This is unique to MRC decoders.**

Only an MRC decoder puts authentic braking action and synchronized sound together. We've added real-life, service braking control. Apply the brake (F[illegible]), it will prototypically slow the loco. Simultaneously, brake squeal will be activated. Stop applying the brake, or come to a stop, the squeal turns off.

Our new, Dynamic Braking feature. Hitting Dynamic Braking (F8) not only slows the loco down, but activates the appropriate sounds. You'll hear the cooling fans come on to cool the resistor grid, the engine notch down and the rpms drop as the train slows.

The first sound decoder to replicate the sounds of three prime movers in a full-size Genset Loco. Developed for an HO Genset loco, it's the sound of three prime movers going on one by one, from idle to a thundering, full-throated rumble. And like the prototype it shuts down after its been on idle for a while.

Lighting control... 11 of them. Our decoders now offer 11 lighting options, including gyro lights, ditch lights, mars lights, strobe lights, oscillating head lights, on-off, dynamic Rule 17, dim bright-off (rule), cabin lights and more.

Stereo Sound. Want prototypical prime mover separation and out of synch RPMs from your dual motored E-8s? Want one prime mover's bell and horn sounds to emanate from the front speaker and the second prime mover's sounds to come from the rear speaker? Then try the new MRC [illegible] drop-in sound decoder for E-8s. Comes with two speakers.

To learn more about MRC sound
decoders, visit us at:
www.modelrectifier.com

BY DAVID LUSTIG

A locomotive's birth certificate

Builder's plates are the ultimate reference point in the life of a locomotive

[illegible]

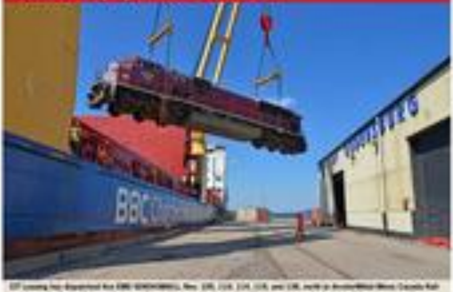
[illegible]

[illegible]

[illegible]

[illegible]

SD90s riding high and bound for Canada



CP Leasing has dispatched five EMD SD90MACs, Nos. [illegible], north to ArcelorMittal Mines Canada Railway (formerly Cartier Railway) for lease. Four of the units, including No. [illegible] (above), were loaded July [illegible] onto a ship at Ogdensburg, N.Y., for movement to Port Cartier, Que. ArcelorMittal needs more units to [illegible]. [illegible]

[illegible]

Progress adds axle control to SD70ACe

EMD SD70ACe No. [illegible] is the first A.C. traction EMD to receive axle control equipment and software. Axle control gives each axle one A.C. inverter, differing from EMD's previous design that uses one inverter per truck, a change that mimics GE's standard. Progress Rail is building five additional SD70ACe demonstrators with axle control at its Muncie, Ind., plant. Road numbers for the five under construction will be [illegible] Nos. [illegible]. Canadian National's previously announced order for [illegible] SD70ACes will be the first order to feature the new equipment, arriving in early [illegible]. [illegible]

BNSF [illegible] No. [illegible] on a Lincoln-Hastings, Neb., local [illegible] one of [illegible] units [illegible] returned to service in local freight duty after being stored for years. BNSF [illegible] of the [illegible] built for Santa Fe (two were wrecked and scrapped before the merger), with No. [illegible] one of only three left in Santa Fe paint. Nos. [illegible] and [illegible] also wear Santa Fe blue and yellow, but remain stored. Only two other Class I railroads, CSX and Union Pacific, still operate the [illegible] model. CSX's units came from Conrail and Norfolk Southern, while UP's came from Cotton Belt and Southern Pacific. [illegible]

Just delivered New York, Susquehanna & Western SD90 No. [illegible] leads two sisters westbound on road freight [illegible] through Maywood, N.J., on June [illegible]. The railroad is receiving six SD90s [illegible] on long-term lease from [illegible] in Paducah, Ky., rebuilt and repainted the units. [illegible]

BNSF in late July began receiving SD70ACes as part of an [illegible]-unit order from EMD being built at [illegible] in Sahagun, Mexico, and carrying Nos. [illegible]. BNSF also accepted [illegible] more General Electric ES44C4s, for a total of [illegible] this year.

BY BOB TUZIK

Shaving steel off the rails

North American railroads examine rail milling as possible key to preventing broken rail

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

>> Shells and spalls and cracks, oh my!

[illegible]

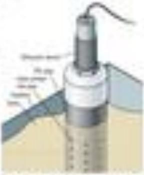
>> More on rail management [illegible]

STUDENTS OF RAILROADING

Finding sand with sound

Michigan Technological University students create new device with tubing and teamwork

Running out of sand is bad. [illegible]



Students created a device to measure sand in a locomotive. [illegible]

FOR SALE

Former SNCF 'Mikado' 141R568 and its Service Carriage

[illegible]

For full details visit www.141R568.ch

BY BOB JOHNSTON

[illegible]

Dakota upgrade saves 'Builder' line

Here's how BNSF Railway fixed a flood-prone line in North Dakota, aiding freight and passengers

[illegible] [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Crews will replace 1950s-vintage bolted rail with welded rail, and install new signals east of Rugby, N.D., seen on June 20, 2013.

[illegible]

Meanwhile, BNSF [illegible]

[illegible]

Without question, [illegible]

» No more pillows for Amtrak coach patrons

Beginning Aug. 1, 2013, [illegible] pillows to coach passengers. [illegible] "passenger comfort kit" [illegible] The kit consists of an inflatable pillow, blanket, [illegible] Discontinuing [illegible] pillows [illegible] when management decided to dispense with the paper doilies on the backs of coach seats, [illegible] cleaning costs. [illegible] since the 1970s. [illegible]

[illegible]

But the lesson here is that the country as a whole, not just the railroad, is benefiting from BNSF's decision to maintain this [illegible] North Dakota.

'Southwest Chief' solution elusive

States, BNSF, and Amtrak must determine routing before 2016

Six months ago, Dodge City [illegible]

[illegible]

Dodge City, Kan., employee [illegible] during a [illegible] 2013, BNSF inspection trip. [illegible]

[illegible]

Caltrain innovates in face of financial difficulties

California commuter rail agency considers fare hike, service changes to close operating budget gap

Evening commuters wait at Mountain View station Feb. 28, while a southbound Baby Bullet approaches.

J[illegible]

[illegible]

City Rail briefs

[illegible] broke ground Feb. [illegible] on its [illegible] light rail line, which is [illegible] service in [illegible].

Los Angeles Metrolink on Feb. [illegible] passengers [illegible] following its Jan. 26 collision that killed 11 and injured more than [illegible] people.

New York City Transit's [illegible] during the March [illegible] riders. [illegible]

Phoenix's Valley Metro Rail broke ground Feb. [illegible] on its [illegible] light rail system connecting Phoenix, Tempe, and Mesa, Ariz.

A Union Pacific [illegible] Los Angeles' Metrolink [illegible] Line.

Oregon's Portland Streetcar opened its [illegible] extension to RiverPlace on March 11. [illegible]

[illegible] Chicago's Metra commuter rail [illegible] March [illegible]

Washington, D.C., commuter railroads MARC and Virginia Railway Express on March [illegible]

[illegible] Express [illegible] Calif. [illegible] March [illegible] Union Pacific [illegible]

Grand Scale Railroad Signals Inc.

Tow Hitch Coupler

[illegible]

[illegible]

[illegible]

NEW BOOK - [illegible]

Now Available

[illegible]

Negatives From the Collections of

[illegible]

Still Steaming

[illegible]

National Historic District

[illegible]

Excursion Schedule

[illegible]

NEVADA NORTHERN RAILWAY

[illegible]

Bob Rivard's

Soo LINE

Recapturing memories of youthful railfanning

By Jim Hediger
Photos by Bob Rivard

F[illegible]

Background

[illegible]

Layout tour

[illegible]

[illegible]

[illegible]

ROCK ISLAND
ROCK ISLAND
SOO
SOO

[illegible]

[illegible]

[illegible]

[illegible]

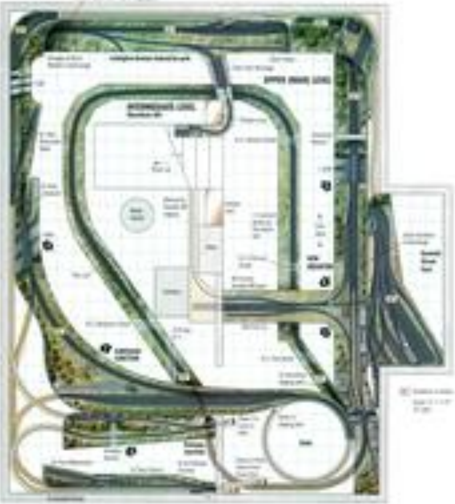
[illegible]

[illegible]

[illegible]

3 Soo Transfer no. 3 [illegible]

4 Soo [illegible]

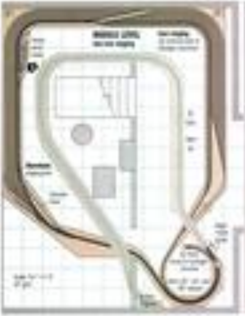


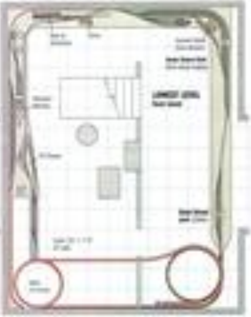
Breaking the rules

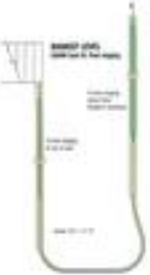
In order to include all of these scenes, Bob had to break some of the common track planning rules, especially the one about avoiding duckunders. [illegible] required several duckunders to fit this long grade in the basement. After ten years of service, Bob is still happy that he didn't compromise on this key operating feature.

Operation

All of the trains operated on this portion of the prototype railroad in 1978 can be run on Bob's layout. A fleet of nearly 150 locomotives [illegible] Alco, Kato, and Stewart [illegible] have been detailed and weathered to match prototype [illegible] their wheel [illegible] this era. [illegible] allows Bob to [illegible] consists for each





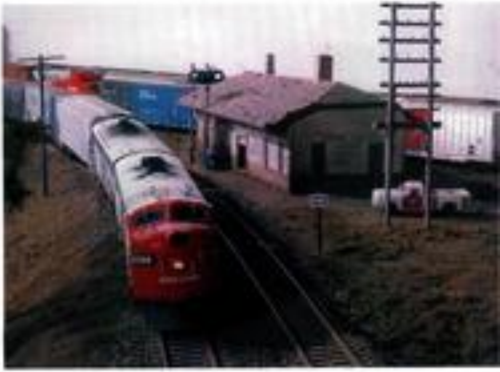


The layout at a glance

Name: Soo Line
Scale: HO (1:87)
Size: [illegible]
Prototype: Soo Line in Wisconsin
Locale: suburban Minneapolis
Period: [illegible]
Layout style: [illegible]
Layout height: [illegible]
Benchwork: L-girder
Roadbed: [illegible]
Track: [illegible]
Length of main line: [illegible]
Turnout minimum: [illegible]
Minimum radius: [illegible]
Maximum grade: [illegible]
Scenery construction: [illegible]
Backdrop: [illegible]
Control: [illegible]

5 [illegible]

6 [illegible]



[illegible]

[illegible]

[illegible]

Meet Bob Rivard

[illegible]

[illegible]

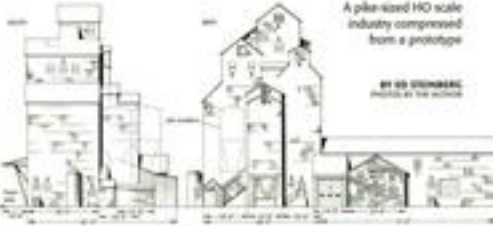
[illegible]

[illegible]

[illegible]

[illegible]

Modeling Maxon Mills



A pike-sized HO scale industry compressed from a prototype

BY ED STEINBERG
PHOTOS BY THE AUTHOR

[illegible]

[illegible]

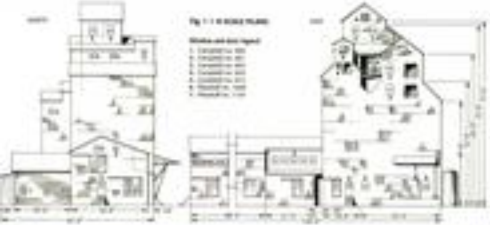
M[illegible]

[illegible]

Locating a prototype

[illegible]

[illegible]



[illegible]

[illegible]

[illegible]

Compressing the mill

[illegible]

[illegible]

[illegible]

Getting started

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Adding the aluminum

[illegible]

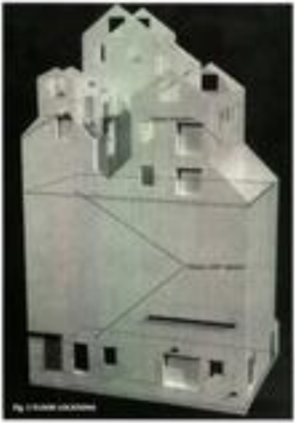


Fig. 1 [illegible]

See fig. 4. It adheres nicely with rubber cement, but can be a messy operation.

Use a carpenter's square to draw pencil lines around each section, the first line [illegible] from the bottom and all the others at [illegible] intervals to allow the aluminum to overlap the course below. Without guide lines it's impossible to keep the aluminum strips parallel.

Simply lay the aluminum across the door and window openings. After the rubber cement has dried for several hours, you can cut out the openings in the aluminum. Use a sharp blade, and work very, very carefully.

The sheathing goes slowly, partly because of the need to allow cement to dry, partly because of the [illegible] previously cemented to the plastic core, and partly because there's so much aluminum to install.

Spray paint and glaze the Campbell windows and doors before cementing them in place with rubber cement. See fig. 1 for notes about the scratchbuilt doors and other details.

Garage and office

Make three sides of the garage from Evergreen no. [illegible] board-and-batten siding and one .030" plain styrene on the back. [illegible]

The prototype office is sheathed in white asbestos siding and has a [illegible] that clearly [illegible] building. Since I wasn't trying to build an exact replica I simplified the office, building it out of Evergreen no. [illegible] siding.

Before painting the office white, make sure the sign will go on. You'll be able to cement the sign to bare styrene. Make both signs of .030" styrene with [illegible] lettering.

Building details and roofing

Build the bridge between the gables on the east side of the elevator tower using .040" styrene. Make the railing out of .010" square strip styrene as shown in fig. 3.

You can use Plastruct no. [illegible] [illegible] all the roof's roofing. It's nicely detailed material and easy to shape, but [illegible] comes in larger sheets. You'll have to splice two pieces for the long warehouse roof, and on my model the joint leaves a lot to be desired.

At the top of the tower, the prototype still has what looks like a chimney finished with [illegible]. It must be some kind of ventilation stack. I built mine out of scraps from commercial building kits.

The [illegible] was the shed next over the unloading pit. Make it from

Fig. 4 [illegible]

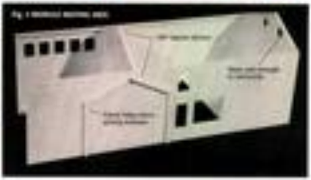
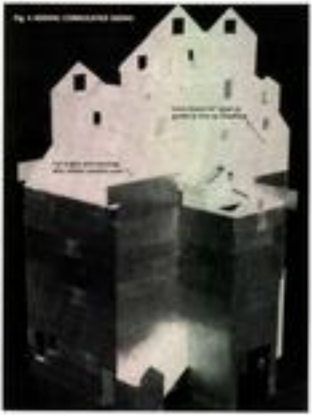
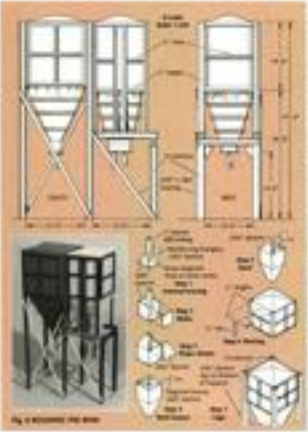


Fig. 5 [illegible]



[illegible]



[illegible]

[illegible]

The loading bins

[illegible]

Planting the mill

[illegible]

Site details

[illegible]

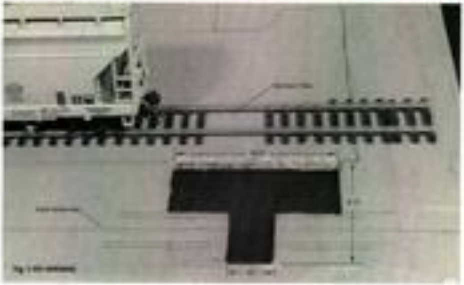


Fig. 3 [illegible]

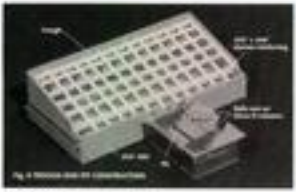


Fig. 4 [illegible] CONSTRUCTION

The bollards (bumping posts) are [illegible] lengths of [illegible] Evergreen round [illegible] painted [illegible] yellow and cemented into [illegible] holes.

[illegible]

Reflections on the project

If I were starting over I'd change a few things, which explains why some details in the drawings don't exactly match the photos of my model. All in all, though, I'm satisfied my model captures the character of the prototype. [illegible] New York, you could add [illegible] to a layout set just about anywhere in the United States. ■

Bill of materials

Campbell Scale Models

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

Evergreen Scale Models

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible] sheet
[illegible]	[illegible] sheet
[illegible]	[illegible] sheet
[illegible]	[illegible] sheet
[illegible]	[illegible]
[illegible]	[illegible]

[illegible]

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

Plastruct

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

ST. JOHNSBURY,

Big action for a mighty small town

VERMONT

RAILROAD BLUEPRINT

Article and photos by Ron Bachman

[illegible]

[illegible]

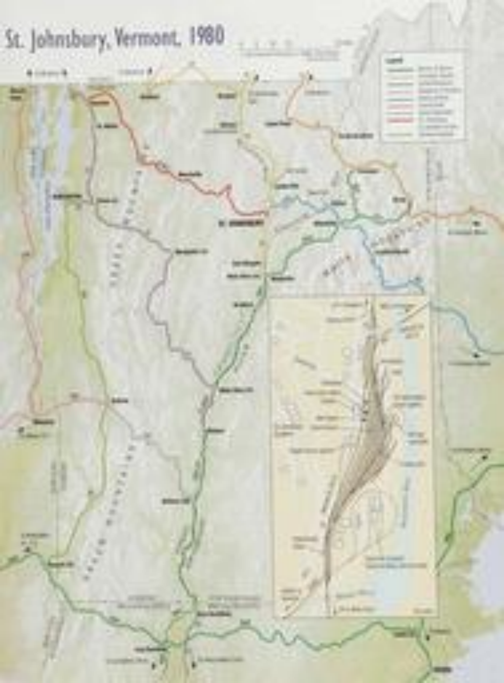
[illegible]

[illegible]

[illegible]

[illegible]

St. Johnsbury, Vermont, 1980



[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Model Railroader

[illegible]

[illegible]

[illegible] Spencer and Corey Caldwell's beautiful [illegible] foot O gauge layout [illegible] nothing they could spend more time exploring it. People [illegible] especially the [illegible] of trains operating [illegible] the [illegible] [illegible] Texas Special.

COVER STORY

TIME FOR FUN!

THE CALDWELLS' O GAUGE LAYOUT PLEASES ALL VISITORS

LEFT: The two old pals hoping to [illegible] to see [illegible] the [illegible] Jay Cain [illegible] using the same techniques he carefully outlined for the readers of Classic Toy Trains in the January [illegible] issue.

RIGHT: The sun is beginning to rise on a June morning in the 1940s when the Chesapeake & Ohio's George Washington heavyweight passenger train [illegible] through town.

By Roger Carp • Photos by Harmon Caldwell III

People stopping by the Caldwell residence to visit Harmon and his wife, Cathy, may not intend to see the train room. But just about all of them, no matter what their age or background, end up there. And what they see and hear leaves them breathless and eager to return.

Harmon points out that most of the family members and friends who drop in seldom know much about O gauge trains. That's fine with Cathy and him. Their hope [illegible] displays will [illegible] and serve as an introduction to the hobby for folks who know nothing about it.

Achieving these two goals – amusing and informing – motivated Harmon and his family during construction of their modern layout. They have remained committed to bringing the fun and thrills of O gauge modeling to [illegible] of the adults and children they know, including [illegible].

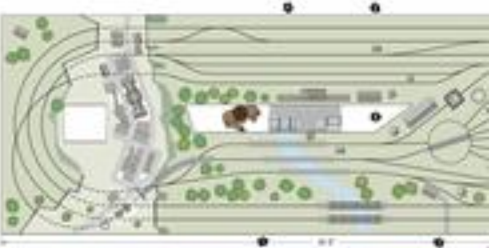
Reliability is key

When asked about the best way to keep visitors amused and informed, Harmon emphasizes [illegible]

CHESAPEAKE & OHIO

[illegible]

[illegible]



An Illinois Central passenger train awaits more travelers as it prepares to [illegible] at the main station on the layout. Lines of folks get ready to board while others just come to watch.

[illegible]

[illegible]

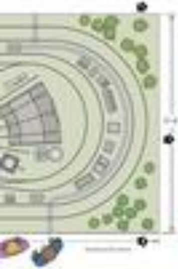
[illegible]

More on electronics

[illegible]

[illegible]

[illegible]



AT A GLANCE

Name: Harrison and Cathy Caldwell's O gauge layout
Dimensions: 17½ x 34 feet
Track and switches: Atlas O (diameters range from 72 to 198 inches)
Motive power: Lionel (postwar, modern), MTH, Williams
Rolling stock: Atlas O, Lionel, MTH, Weaver
Controls: MTH Z-4000 transformers (2) with Lionel Legacy command control
Accessories: Atlas O, MTH, Lionel
Structures: Atlas O, Bar Mills, [illegible] Model Railroading, Design Preservation Models, Downtown Deco, JL Innovative Design, Lionel, Lunde Studios, [illegible] Studio, [illegible] Models, [illegible], Scale Structures, Ltd., & Walthers, Woodland Scenics
Vehicles: Brooklin, Mini Metals, [illegible], Woodland Scenics
Figures: Arttista, Woodland Scenics

LEFT: A locomotive servicing area, various industries, and a station are among the highlights of the 17½ x 34-foot O gauge layout belonging to the Caldwell family. The numbered arrows correspond to the numbers in the captioned photos.

BELOW: 3 Main lines stretching the length of the almost 600-square-foot display offer the perfect setting for the freight and passenger trains viewers enjoy.

Harrison and his children often debate whether to concentrate on steam or diesel motive power on their model railroad. It's pretty clear which side claimed victory, at least down at the three-stall roundhouse and turntable.

The temperature keeps rising on this July day until it's likely to melt the ice cream the kids are buying. The heat is worse inside the cab of the Southern GP9 road diesel.

Reliable scenery

Describing the scenery on Harrison's layout as reliable may sound a bit confusing. Does it mean he [illegible] the same types of landforms and trees that they discover on other model railroads? Are familiar mountains, farms, [illegible] fields, and hollows what we have in mind when referring to scenery as reliable?

Not really. Instead, Harrison and his [illegible] depended on trusted techniques and products to make realistic and pleasing sights without much effort.

For him, as he explained in the article about his O gauge layout in the December 2013 issue of CTT, everything starts with the versatile compound!

Achieving those two primary goals – amusing and informing – motivated Harmon and his family throughout the construction of their realistic layout.

[illegible]

[illegible]

Reliable foundations

[illegible]

Enjoy the tour

[illegible]

Make your own stripwood

It's easy and economical to make exactly the sizes you need

PROJECT

[illegible]

[illegible]

[illegible]

Terminology

[illegible]

[illegible]

• The **miter gauge** is used for cross cutting. This slides in a slot in the table and has a fence that is used to push the wood through the blade. This face can be angled to make miter or angle cuts.

• A **push stick** is a simple strip made and used to safely push the wood through the blade.

• A **featherboard** is another simple aid that is used to keep the wood pressed firmly against the fence. Both the push stick and the featherboard are inexpensive and are important safety features.

Safety

Absolutely the most important thing to always keep in mind when using a table saw of any kind is safety. [illegible] a table saw is one of the most valuable tools a garden railroader can have. Here are a few safety tips.

• Always leave the blade guard in place. While you might consider it a nuisance, you'll get used to it.

• Do not stand in the line of the blade; stand to one side. Sometimes the blade can grab a piece of wood and spit it back at you (called kickback), so you don't want to be in the line of fire.

• Always wear eye protection.

• Keep fingers and other body parts clear of the blade at all times. This may seem obvious, but I have seen more than one experienced carpenter who has come to grief in a lax moment.

• Never use the miter gauge and the fence at the same time. Use one or the other to guide the wood.

• Always use a push stick to help feed the work into the saw.

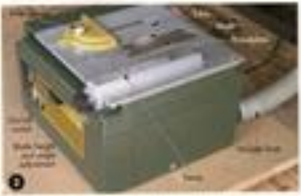
• Always position the saw blade just slightly above the height of your work.

• [illegible]

Making a push stick and featherboard

A push stick is easily made in just minutes from any scrap of wood. Cut a notch in the end to securely engage the work, and you're ready (see figure 1). As the end of the stick eventually gets chewed up by the blade, simply make another.

The featherboard is also easy to make. Start with a strip of wood about 1" thick [illegible]



Parts of a table saw. This is one of the most valuable tools for a garden railroader.

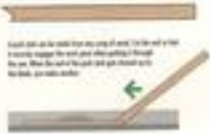
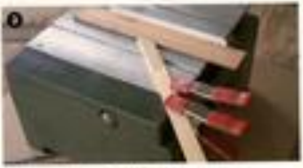

A push stick can be made from any scrap of wood. Cut the end so that it securely engages the work piece when pushing it through the saw. When the end of the push stick gets chewed up by the blade, just make another.

Figure 1
Making and using a push stick



A featherboard holds the work securely and safely against the fence and prevents kickback.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Making stripwood

[illegible]

[illegible]

[illegible]

[illegible]

8

[illegible]

9

[illegible]

10

[illegible]

The scarcest Dorfan locomotive

Discovering whether a no. 492 O gauge electric was ever made

BY JEFFREY RALSTON
PHOTOS BY LLOYD RALSTON GALLERY

[illegible]

[illegible]

RENAISSANCE IN NEWARK

[illegible]

AN UNKNOWN LOCOMOTIVE

[illegible]

[illegible]

[illegible]

DEBUT OF NO. 34

[illegible]

[illegible]

Louis Hertz, the dean of toy train historians, pointed out that Dorfan doubled this striking [illegible]

CSX's Eastern Kentucky Division

Times have changed in Appalachia, but the railroading is still well worth modeling

By Anthony Hardy

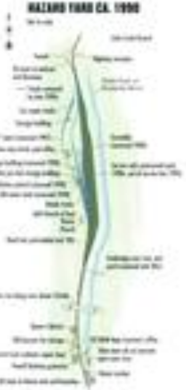
[illegible]

[illegible]

[illegible]

Left: [illegible] **Bottom:** [illegible]

[illegible]


HAZARD YARD CA. 1990

CSX IN EASTERN KENTUCKY

[illegible]

[illegible]

[illegible]

[illegible]

Other traffic

[illegible]

[illegible]

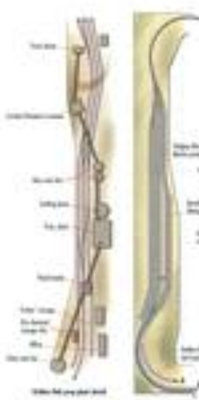
[illegible]

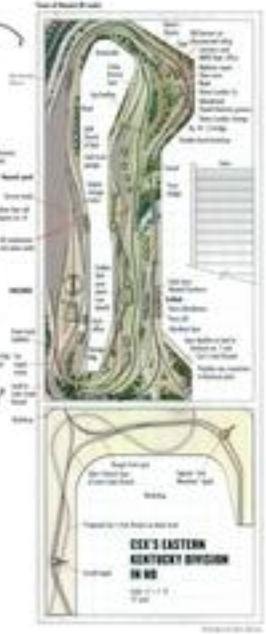
[illegible]

[illegible]

[illegible]

Top: [illegible] **Middle:** [illegible] **Bottom:** [illegible]





CSX'S EASTERN KENTUCKY DIVISION IN HO

Learning points

- [illegible]
- [illegible]
- [illegible]
- [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Modeling the [illegible]

[illegible]

[illegible]

[illegible]

Progress report – Top: [illegible] **Middle:** [illegible] **Bottom:** [illegible]

[illegible]

[illegible]

[illegible]

Operation

[illegible]

[illegible]

[illegible]

[illegible]

Top: [illegible] **Middle:** [illegible] **Bottom:** [illegible] **Right:** [illegible]

[illegible] operations in [illegible]

[illegible]

THE TRAIN THAT STARTED IT ALL

The story of the first long-distance, unit-train haul of Powder River Basin coal — that still runs today

by Steve Glischinski

[illegible]

[illegible]

[illegible]

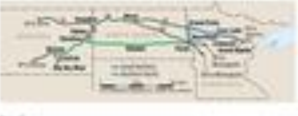
[illegible]

[illegible]

[illegible]

[illegible]

[illegible]



An eastbound Northern Pacific Colstrip-bound coal train awaits a crew change at Mandan, N.D., in July 1969 (top). Empties speed through the "Coal Connector" at Fargo, N.D., a track added to handle Colstrip trains. [illegible] collection, above; [illegible]

until the engines swapping at interchange.

The first years didn't offer any clues as to what the future would bring. "We had no idea what it would ultimately become," Dunning said. "But we knew it was a big deal because we knew where the coal was. We knew there were billions of tons of coal there, and it eventually would see it, why we were more than happy to serve it."

The NPRI contract marked the beginning of BN as a major coal hauler before the merger was even complete. At first 1970, BN ordered 135 high-side, 100-ton coal service gondolas from Thrall Manufacturing. Later, the utilities would supply their own cars.

Even as other Powder River coal contracts proliferated, the Boswell contract grew. In 1973, Minnesota Power completed its expansion of the plant. In 1976, BN built a roughly two-mile connection track from West Fargo to the northern part of Fargo, N.D. The new track enabled trains to switch from ex-NP to ex-GN tracks at Fargo instead of Moorhead, Minn., a roughly 3,000-foot "coal connector" at Fargo. Sure ended the need for a change of direction where BN's routes to Grand Forks and Minot, N.D. split.

In 1980 the Boswell plant added a fourth unit capable of generating 500 megawatts. The plant's total output now exceeds 1,000 megawatts, placing it among the state's largest. Powder River Basin shipments to the plant now exceed [illegible] tons annually under BNSF.

The Colstrip contract is now one of many major Powder River coal destinations, but for the record that it was the first. ■

The spirit of '49

The year 2009 will be something of a landmark in the story of my [illegible] Railway. Was it really 60 years ago [illegible] garden railways? [illegible] March of 1949 [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

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[illegible]

[illegible]

[illegible]

"Most at-risk" list

[illegible]

[illegible]

[illegible]

PRESERVING HISTORY
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[illegible]

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[illegible]

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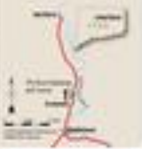
» This Month:

- Trains in the PGA Tour?
- Amtrak's P40s
- [illegible]

The Providence & Worcester operates in four Northeastern states. Here, train [illegible] passes the Thames River in Preston, Conn., on Sept. 1, 2009. [illegible]

Q I was watching a professional golf tournament being played in Cromwell, Conn., just south of Hartford. Who owns the rail line that passes between the 13th hole and the Connecticut River?
— David Mitchell, Franklin, Texas

A [illegible]



Q Whatever became of Amtrak's P40s? They were numbered in the 800 series and looked very similar to the P42s in service today. What's the difference between them? Does Amtrak still have any mechanically intact P40PHs on the property? — [illegible]

A [illegible]

Amtrak P40s that didn't make the first cut for rebuilding wait their turn in Bear, Del., on June 7, 2008. [illegible]

[illegible]

Q Last year I saw a caboose on the tail end of a BNSF Railway train with PNRX reporting marks. Is it escorting the three hopper cars in front of it? Who owns it, and what does PNRX stand for?
— [illegible]

This bright red caboose and its sister, No. [illegible] [illegible]

A [illegible]

[illegible]

Q [illegible]

A [illegible]

Have a question?

We welcome your questions about railroading, and will answer as many as space permits.

Ask Trains
P.O. Box 1612
Waukesha, WI 53187-1612
askTrains@TrainsMag.com

In the current issue

Summer 2012 Edition

SPECIAL ISSUE!
A [illegible]-page tribute to the E unit, [illegible] years after its introduction

E units, A through [illegible]
[illegible]

Birth of the Warbonnet
[illegible]

Advertising the E Unit
[illegible]

Streamliner Designer
[illegible]

Of Hoops and Markers
[illegible]

Iowa Interurban Ride
[illegible]

Fallen Flags Remembered
[illegible]

All-Steam Photo Section

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Classic Trains

NARROWBAND ON A BUDGET?

EMPLOYMENT OPPORTUNITY

Associate editor

[illegible]

[illegible]

FANTRIP

[illegible]

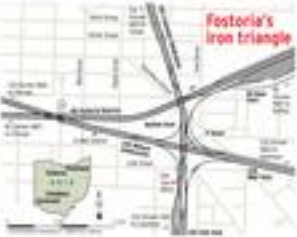
Ohio's iron triangle welcomes fans

Preservation group and city partner to build a railroad park in Fostoria, Ohio

[illegible]

Fostoria is sending a message to railfans: [illegible]

[illegible]



[illegible]

[illegible]

[illegible]

[illegible]

2010 Photo Contest

Trains magazine's 2010 photo contest is accepting entries. This year's contest is open to all photos taken before Dec. 31, 2010. Your best shot, regardless of topic, is your ticket to our top prize this year. Each contestant may enter up to five photos. Digital submissions should be uploaded to our FTP site, www.contribute.kalmbach.com, and slides or prints may be sent to Trains 2010 Photo Contest, P.O. Box 1612, Waukesha, WI 53187. Winners will receive cash prizes of up to $750, and all the winners will be published in Trains July 2011 issue.

[illegible]

Fall 2010 Edition

Toward the 2-10-4
[illegible]

Time Travel, 1966
[illegible]

All-Diesel Photo Section
[illegible]

Up to Monarch!
[illegible]

The Wacky Portage Flyer
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Little Joes in Indiana
[illegible]

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[illegible]

ONLINE STATION

Almost all narrow gauge railroads reached a standard gauge line at some point at which location there would be a shared platform or a transfer house that permitted movement between the different gauge railroads. Such a facility is a great thing to have on your narrow gauge railroad, whether you are operating sessions or the trains just roll through the scenes you have created.

[illegible]

1:24 and 1:20.3 Garden Railroad Structures
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EVENTS

7 October, 2012 [illegible] Annual Garden Railway Tour Lancaster, PA area, [illegible]. Info: Railroad Museum of Pennsylvania, 300 Gap Rd., Strasburg PA 17579 • 717-687-8628 • www.rrmuseumpa.org

27-28 October, 2012 Halloween Spooktacular Steam Up, Texas Transportation Museum, 11731 Wetmore Rd., San Antonio TX 78247. 10 a.m. to 5 p.m. Info: [illegible] 210-490-3554 • www.txtransportationmuseum.org

18-22 January 2013 International Small Scale Steamup Diamondhead, MS. [illegible] 4402 Diamondhead Drive East, Diamondhead MS 39525 • [illegible] • www.diamondhead.org

5-9 June, 2013 29th National Garden Railway Convention, Cincinnati, OH. Info: http://ngrc2013.com/

26-29 June, 2013 "On our Way to Santa Fe" Big Train Operators Club 25th Anniversary Convention, Santa Fe, NM. Info: [illegible] • www.bigtrainoperators.com

Future Garden Railway Conventions:
2014: Tampa, FL, [illegible]
2015: Denver, CO
2016: Bay Area, CA

Event notices are published at no charge. Due to space limitations we will accept, at our discretion, listings that pertain to predominantly garden railway or small scale live steam events. Listings that reach us before our deadline and fit the space available will be published. Send your listings to:

Garden Railways, PO Box 460222, Denver CO 80246, or e-mail them to editor@gardenrailways.com.

For everyone: Find more model train events in our online database at Trains.com. Click on "Coming events" under Resources.

Show promoters: List your event free of charge online, in the "Coming events" section at Trains.com. Fill out the form under "Add an event."

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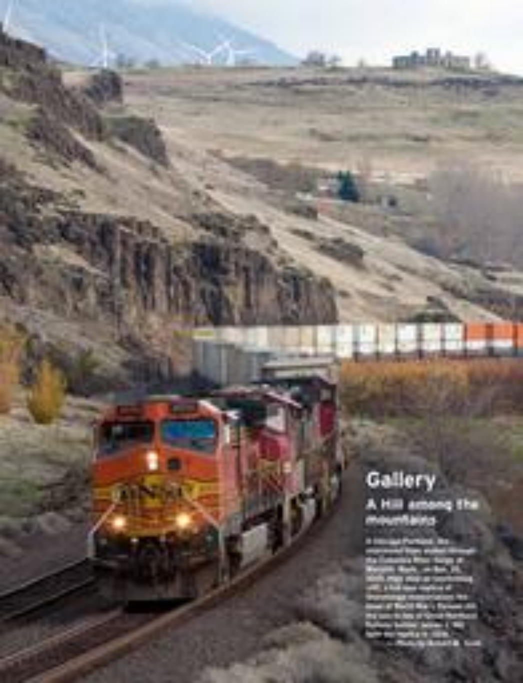


Gallery

A Hill among the mountains

A Chicago-Portland, Ore., intermodal train snakes through the Columbia River Gorge at Maryhill, Wash., on Nov. 26, 2005. High atop an overlooking cliff, a full-size replica of Stonehenge memorializes the dead of World War I. [illegible] the son-in-law of Great Northern Railway builder James J. Hill, built the replica in 1918.

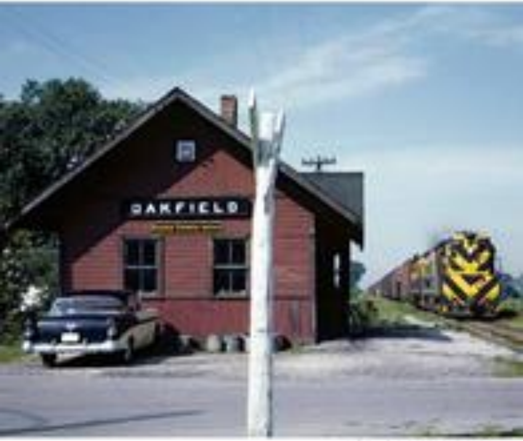
— Photo by [illegible]

Hot exhaust in the cold winter air

Four Conrail diesels send exhaust skyward at the head of a [illegible] freight on Valentine's Day, [illegible]. The train is shadowing the Conemaugh River through Johnstown, Pa., across the river from Cambria Steel. In the background, the Johnstown Incline stands ready to evacuate the city's residents the next time the Conemaugh rises from its banks.
— Photo by [illegible]

All the branches burst a'bloom

CSX train Q359 shakes the town of Pleasant Valley, Ky., as it heads for Queensgate Yard in Cincinnati on April 5, 2022. It's traversing the ex-Louisville & Nashville Louisville-Cincinnati main line.
— Photo by Charles Bennett

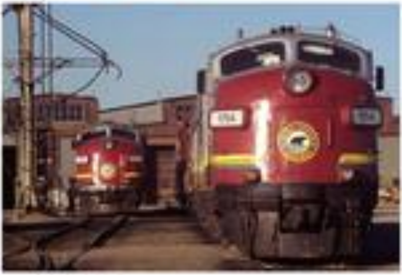


Stripes of summer

Fairbanks-Morse "Trainmaster" thrums under a southbound Chicago & North Western freight past the Oakfield, Wis., depot on June 24, 1963. The Fond du Lac–Janesville, Wis., route is now the Wild Goose State Trail. — Photo by [illegible]

Sure as the sun rises in the East

The sun begins to paint the sky above Mendota, Ill., a brilliant orange before sunrise on Oct. 21, 2007. The pole line pictured shadows the ex-Chicago, Burlington & Quincy Chicago-Galesburg, Ill., main line, now BNSF Railway's Mendota Subdivision. — Photo by Eric Powell



Famous faces

Algoma Central passenger service [illegible] congregate at Sault Ste. Marie, Ont., on June 21, [illegible]. An [illegible] set of Algoma Central's fleet continues to serve on freight-hauling short line [illegible] in Illinois.
— Photo by Craig [illegible]

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Andy Sperandeo

Operating with fiddle yards

Fiddle yards are hard to beat [illegible]

Bob Kunz, the fiddle operator on Larry Roell's HO scale Minneapolis, St. Croix & Southern, pulls cars from storage to make up the next outbound freight. The St. Croix saves space by having double-deck fiddle yards. [illegible]

The flexibility of active staging [illegible]

Open-ended operations [illegible]

The San Luis & Rio Grande

[illegible]

The Union Pacific

[illegible]

The EMD SD90/43MAC

[illegible]

[illegible]

[illegible]	N EMD SD90/43MAC San Luis & Rio Grande [illegible]	[illegible]
[illegible]	N EMD SD90/43MAC San Luis & Rio Grande [illegible]	[illegible]
[illegible]	N EMD SD90/43MAC Union Pacific [illegible]	[illegible]
[illegible]	N EMD SD90/43MAC Union Pacific [illegible]	[illegible]
[illegible]		
[illegible]	[illegible] 8 Car Set [illegible]	[illegible]
[illegible]	[illegible] 8 Car Set [illegible]	[illegible]

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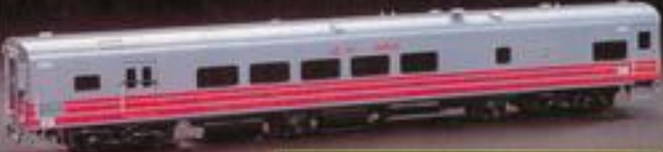
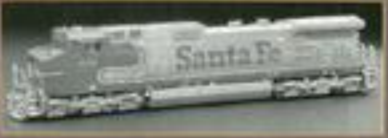
SANTA FE 'C44-9W' and GE TEST CAR

These two General Electric models are now in stock and can be ordered from your favorite Overland Models dealer today. Each of these models is exquisitely handcrafted in brass by Ajin Precision of Korea. GE Test Car No. 98, the Gemini, is accurately modeled with many added details such as antennas, modifications, and full underbody detail. The Santa Fe "C44-9W" is always a popular unit sporting the colorful Warbonnet paint scheme. It features a German-made Bühler can motor, operating head and ditch lights, cab window glass and cab interior details. Both are ready for the installation of Kadee #5 couplers. Stop and see your friendly OMI dealer today to place your order!



▲ GENERAL ELECTRIC Test Car No. 98, the Gemini, Factory Painted and Lettered, and Equipped with Operating Lights — OMI-[illegible]



▶ SANTA FE "C44-9W" Nos. [illegible], Factory Painted and Lettered, and Equipped with Operating Lights — OMI-[illegible]

Overland Models, Inc.

[illegible]